EPCRA SECTION 313
LIST OF TOXIC CHEMICALS

SECTION 313 LIST OF CHEMICALS AND CHEMICAL CATEGORIES

- Current list contains over 600 individual chemicals and chemical categories (§372.65)
- Dynamic, evolving list
  - Additions
  - Deletions
  - Modifications
- Petition process to add or delete chemicals or forms of chemicals

SECTION 313 CHEMICAL QUALIFIERS

- Qualifiers - Listed chemicals with parenthetic qualifiers subject to TRI reporting only if manufactured, processed, or otherwise used in specified form (§372.25(g)). Below are some examples:

CHEMICAL	CAS#	QUALIFIER
Aluminum	7429-90-5	Fume or dust
Aluminum oxide	1344-28-1	Fibrous forms
Asbestos	1332-21-4	Friable forms
Isopropyl alcohol	67-63-0	Only manufacturers using strong acid process
Phosphorus	7723-14-0	Yellow or white
Saccharin	81-07-2	Manufacture only
Sulfuric acid	7664-93-9	Acid aerosols
Vanadium	7440-62-2	Except when contained in alloy
Barium Compounds	N040	Does not include barium sulfate

CHEMICALS ADDED BY THE PBT CHEMICAL RULE

- Additions to TRI list effective January 1, 2000, reports due July 1, 2001
  - Benzo(g,h,i)perylene
  - Benzo(j,k)fluorene (fluoranthene) & 3-methylcholanthrene added as part of polycyclic aromatic compounds (PACs) category
  - Octachlorostyrene
  - Pentachlorobenzene
  - Tetrabromobisphenol A (TBBPA)
  - Dioxin and dioxin-like compounds category
  - Vanadium compounds (not a PBT chemical)

CHEMICAL LIST DELETIONS

- Phosphoric acid deleted - effective RY 1999 (June 27, 2000; 65 FR 39552)
- Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR) deleted – effective RY 2000 (May 11, 2001; 66 FR 24066)
- Petitions to delete denied
  - Methyl ethyl ketone (MEK)
  - Methyl isobutyl ketone (MIBK)
  - Acetonitrile

MODIFIED CHEMICAL LISTINGS

- Vanadium (fume or dust) is now vanadium (except when contained in alloy)
  - Effective RY 2000
- Ammonia
  - Requires threshold determination and release and other waste management quantity calculations for aqueous ammonia from any source (i.e., anhydrous ammonia placed in water or water dissociable ammonium salts) be based on 10% of the total ammonia present in aqueous solutions
  - Anhydrous ammonia - include 100% for thresholds and releases
    - » Including air releases from aqueous ammonia
  - Effective RY 1994

MODIFIED CHEMICAL LISTINGS

- Glycol ethers category
  - Removed surfactant glycol ethers from category (July 5, 1994; 59 FR 34386)
  - Common glycol ethers still in category include:
    - » 2-Butoxyethanol (CAS # 111-76-2)
    - » Diethylene glycol monoethyl ether acetate (CAS # 112-15-2)
    - » Diethylene glycol monobutyl ether (CAS # 112-34-5)
  - Effective RY 1993

NITRATE COMPOUNDS

- Water dissociable nitrate compounds category
  - For threshold determinations, use the weight of the entire nitrate compound
  - Calculate only the weight of the nitrate ion portion when calculating releases and other waste management quantities
  - Nitrate compounds are produced most commonly when nitric acid is neutralized
  - Includes compounds like sodium nitrate, silver nitrate, and ammonium nitrate

DETERMINING THRESHOLDS FOR NITRATE COMPOUNDS

- **Example:**
  - 20,000 pounds of nitric acid (HNO_3) are neutralized with sodium hydroxide (NaOH) in an on-site wastewater treatment system. Perform a threshold determination for nitrate compounds (water dissociable; in aqueous solution):

    Assume:

    » Neutralization 100% complete and generates sodium nitrate ($NaNO_3$), which is released to a waterbody

    » Molecular weight (MW) of HNO_3 = 63

    » MW of $NaNO_3$ = 85

    » 1 mole of HNO_3 generates 1 mole of $NaNO_3$

DETERMINING THRESHOLDS FOR NITRATE COMPOUNDS

- **Example (continued):**

  Quantity of $NaNO_3$ manufactured = quantity of HNO_3 neutralized x (MW of $NaNO_3$/MW of HNO_3)

  Quantity of $NaNO_3$ manufactured = 20,000 lbs. x (85/63)

  Quantity of $NaNO_3$ manufactured = 26,984 lbs.

  The 25,000 pound manufacturing threshold is exceeded!

CALCULATING RELEASES FOR NITRATE COMPOUNDS

- **Example (continued):**

  Releases are reported on nitrate ion (NO_3^-) basis. Calculate the quantity of nitrate ion (MW of NO_3^- = 62) released to a waterbody:

  Lbs. of NO_3^- = lbs. of $NaNO_3$ x (MW of NO_3^-/MW of $NaNO_3$)

  Lbs. of NO_3^- = 26,984 lbs. x (62/85)

  Lbs. of NO_3^- = 19,682 lbs. (rounded to 20,000 lbs.)

OTHER NON-METAL COMPOUND CATEGORIES

- Consider the entire weight of the compounds in these categories when determining thresholds
- Include the entire weight of the compounds in the category when calculating releases and other waste management quantities for all compounds in these categories

XYLENE AND XYLENE ISOMERS

- If data do not specify o-, m-, or p- isomers of xylene, calculate thresholds, release and other waste management quantities based on "xylene (mixed isomers)"
- If data specifies o-xylene, m-xylene, or p-xylene individually, calculate thresholds, release and other waste management quantities based on the individual isomers
  - If thresholds are exceeded for more than one isomer, releases and other waste management quantities can be consolidated in one report as "xylene (mixed isomers)"
- Same logic applies to cresol, toluene diisocyanates

ADMINISTRATIVE STAYS

- No reporting required for the following chemicals until further notice
  - 2,2-Dibromo-3-nitrilopropionamide (DBNPA) (CAS # 10222-01-2)
    - » Effective RY 1995
  - Hydrogen sulfide (CAS # 7783-06-4)
    - » Effective RY 1994
  - Methyl mercaptan (CAS # 74-93-1)
    - » Effective RY 1994